

IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

PATENT APPLICATION

Applicant: **Charles B. Dieterich, Arthur L. Greenberg**

Case: **SAR 12080A**

Serial No.: **Unallocated**

Filed: **Herewith**

Group Art Unit:

Examiner:

Title: **"METHOD AND APPARATUS FOR ANALYZING AND MONITORING
PACKET STREAMS"**

ASSISTANT COMMISSIONER FOR PATENTS
Box Patent Application
Washington, D. C. 20231

S I R:

PRELIMINARY AMENDMENT

Please amend the above-identified 37 C.F.R. 1.53(b) continuation patent application filed simultaneously herewith, as follows:

IN THE SPECIFICATION

On page 1, please delete lines 4-5 and replace with -- This application is a continuation of U.S. Application serial number 08/816,457, filed on March 12, 1997, which claims the benefit of U.S. Provisional Application No. 60/013,361 filed March 13, 1996.--

IN THE CLAIMS

Please cancel claims 1-15 without prejudice.

Please add the following new claims 20-27:

1 20. (Newly added) A computer-readable medium having stored thereon a plurality
 2 of instructions, the plurality of instructions including instructions which, when
 3 executed by a processor, cause the processor to perform the steps comprising of:
 4 a) receiving the plurality of packets into a buffer;
 5 b) extracting a plurality of time base information from said plurality of
 6 packets; and
 7 c) comparing said time base information to detect transport rate jitter.

1 21. (Newly added) The computer-readable medium of claim 20, wherein said
 2 extracting step (b) comprises the steps of:
 3 b1) computing a difference between a current recorded program clock
 4 reference (PCR) value and a last recorded PCR value; and
 5 b2) computing a difference between a current (PCR) value and a last PCR
 6 value.

1 22. (Newly added) The computer-readable medium of claim 20, wherein said
 2 extracting step (b) comprises the steps of:
 3 b1) computing a total unit of bit time by multiplying a number of received
 4 packets with a number of bits per packet; and
 5 b2) computing a total unit of bit time by multiplying a difference between a
 6 current program clock reference (PCR) value and a last PCR value with a bit rate
 7 in units of bits per PCR tick.

1 23. (Newly added) The computer-readable medium of claim 20, wherein said
 2 extracting step (b) comprises the steps of:
 3 b1) computing a total unit of bit time by multiplying a number of received
 4 packets with a number of bits per packet; and
 5 b2) computing a total unit of bit time by multiplying a difference between a
 6 current recorded program clock reference (PCR) value and a last recorded PCR
 7 value with a bit rate in units of bits per PCR tick.

1 24. (Newly added) Apparatus for evaluating in real-time a packet stream having a

plurality of packets, said apparatus comprising:
a buffer for receiving the plurality of packets;
means for extracting a plurality of time base information from said
plurality of packets; and
means for comparing said time base information to detect transport rate
jitter.

25. (Newly added) The apparatus of claim 24, wherein said extracting means
computes a difference between a current recorded program clock reference (PCR)
value and a last recorded PCR value, and computes a difference between a
current (PCR) value and a last PCR value.

26. (Newly added) The apparatus of claim 24, wherein said extracting means
computes a total unit of bit time by multiplying a number of received packets with
a number of bits per packet, and computes a total unit of bit time by multiplying a
difference between a current program clock reference (PCR) value and a last PCR
value with a bit rate in units of bits per PCR tick.

27. (Newly added) The apparatus of claim 24, wherein said extracting means
computes a total unit of bit time by multiplying a number of received packets with
a number of bits per packet, and computes a total unit of bit time by multiplying a
difference between a current recorded program clock reference (PCR) value and a
last recorded PCR value with a bit rate in units of bits per PCR tick.

REMARKS

This amendment is made before examination of the application. The new
claims are added solely to more particularly point out and distinctly claim the
invention.

The above amendments have been made to cancel the claims 1-15 originally
filed in the parent application (Serial Number 08/816,457, filed on March 12, 1997)
and to add new claims. Specifically, various claims in the parent application

have since been allowed. Claims 16-20 in the parent application were canceled to expedite issuance of the parent application.

As such, the present continuation application continues the prosecution of canceled claims 16-19 of the parent application. Newly added claims 20-23 and 24-27 are computer readable medium claims and apparatus claims, respectively, that correspond to the method claims 16-19.

Please take notice that the original claim 17 of the parent application was canceled and then reinserted back as claim 20 during the prosecution of the parent application. Thus, for the purpose of the present continuation application, any prior rejection against claim 20 is addressed below as a rejection against claim 17 of the present continuation application.

I. CLAIMS 18-19 HAVING ALLOWABLE SUBJECT MATTER

Applicants acknowledge and express their appreciation for the indication in Paragraphs 6-7 of the Final Office Action of the parent application that claims 18-19 contain allowable subject matter, "if rewritten in independent form including all of the limitations of the base claim and any intervening claims".

Responsive to the Examiner, Applicants request reconsideration of the Examiner's determination that claims 18-19 are non-compliant to §112 or depend upon a rejected base claim for the reasons set forth below. It is respectfully submitted that Applicants' explanation below, place claims 18-19 in condition for allowance. Thus, the Applicants believe that all of these claims are now in allowable form.

II. REJECTION OF CLAIMS 16-19 UNDER 35 U.S.C. § 112

The Examiner rejected claims 16-19 under 35 U.S.C. 112, second paragraph, as being indefinite to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner alleged that "regarding to claim 16: it is not clear what [is] meant by 'comparing said time base information to detect transport jitter' because claim 16 failed to show what would be compared to the time base information to detect transport rate jitter, thus it is indefinite". Applicants respectfully disagree.

Responsive to the Examiner, Applicants maintain that claim 16 clearly satisfies the requirements of U.S.C. 112, second paragraph. First, Applicants continue to maintain that the term “time base information” is clearly defined in view of Applicants’ specification, which teach three distinct methods to detect transport jitter. Each distinct method utilizes a slightly different aspect of the “time base information”, which is claimed in greater detail in dependent claims, 17-19. For example only, time base information may comprise “a number of received packets” or “recorded program clock references” as taught by Applicants’ specification. Since the Examiner is unable to provide any references that would prohibit Applicants’ broad use of the term “time base information” in regard to the detection of transport jitter, Applicants respectfully submit that claim 16 fully satisfies the requirements of U.S.C. 112, second paragraph.

Next, the Examiner alleged that “regarding to claim 17: it is not clear what [is] meant by ‘current recorded PCR value’ because if a current PCR value is being recorded then the ‘current PCR value’ is becoming ‘a last PCR value’”.

The Examiner is again directed to Applicants’ specification, page 15, lines 6-9, which explains the computation at issue and also page 14, lines 25-35 that discloses the concept of “recorded PCR values”. The answer is simply that Applicants’ invention is capable of capturing and distinguishing these two values and a computation is then performed. More specifically, the term “current” and “last” denote a time relationship, where a “current” recorded PCR value is a more recent recorded PCR value from that of a “last” recorded PCR value. As correctly noted by the Examiner, a current recorded PCR value will eventually replace the “last” recorded PCR value, but only for the next computation. For any computation, the method is able to have both values for processing. Thus, Applicants’ claim 17 is clearly defined and particularly claims the invention.

Thus, the Applicants believe that claims 16-19 fully satisfy the requirement of 35 U.S.C. 112, second paragraph and are in allowable form.

III. REJECTION OF CLAIM 16 UNDER 35 U.S.C. § 102(e)

The Examiner rejected claim 16 in Paragraph 4 of the Final Office Action of

the parent application as being anticipated by Burton (U.S. Patent 5,694,397 issued December 2, 1997). The rejection is respectfully traversed.

During the in-person Examiner Interview of July 18, 2000, Examiner Nguyen and SPE Nguyen acknowledged that the documents submitted by Applicants and declaration under 37 CFR 1.132 did in fact pre-date the Burton patent which was filed on September 22, 1995. Specifically, the Applicants submitted that they conceived their invention, as presently claimed, prior to the filing date of the Burton patent.

However, the Examiner alleged in the Advisory Action of the parent application that "the Declaration under 37 CFR 1.132 fails to provide sufficient facts to overcome the rejection, i.e., failure to point out how page 5 of the report supports claim 16, rate matching is not the same as jitter". Applicants respectfully disagree.

In paragraph 5 of the Declaration, Dr. Michael Isnardi specifically declared and cited phrases in the report that supported the disclosure of the use of time base information to make rate jitter measurements. This is a positive assertion made by an individual who is skilled in the art. Thus, Applicants have clearly demonstrated that the submitted evidence is sufficient to establish Applicants' earlier conception date.

Thus, Applicants again reassert that the submitted documents and 1.132 declaration from Dr. Michael Isnardi (as submitted during the prosecution of the parent application), clearly support Applicants' position that the submitted documents disclose the concept for detecting transport rate jitter.

Thus, claim 16 is not anticipated by the Burton patent and fully satisfies the requirements of 35 U.S.C. § 102.

IV. REJECTION OF CLAIM 17 UNDER 35 U.S.C. § 103

The Examiner rejected claim 17 in Paragraph 5 of the Final Office Action of the parent application under 35 U.S.C. 103(a) as being unpatentable over Burton in view of Goldman et al. (5,535,216). The rejection is respectfully traversed.

For the same reason discussed above, since Applicants conceived the

present invention before the filing date of the Burton patent, this reference cannot be used in the alleged combination for an obviousness rejection.

As such, the Applicants respectfully submit that Applicants' claim 17 is not obvious in view of the references cited by the Examiner.

Conclusion

Thus, the Applicants submit that all of the pending claims now fully satisfy the requirements of 35 U.S.C. §102, §103 and §112. Consequently, the Applicants believe that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

Respectfully submitted,

2/12/01

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I hereby certify that this correspondence is being deposited on February 15, 2001 with the United States Postal Service as Express mail, with sufficient postage, in an envelope addressed to the Assistant Commissioner of Patents, Box Patent Application, Washington, D.C. 20231.

Michael Cecil
Signature

2-15-01
Date of signature